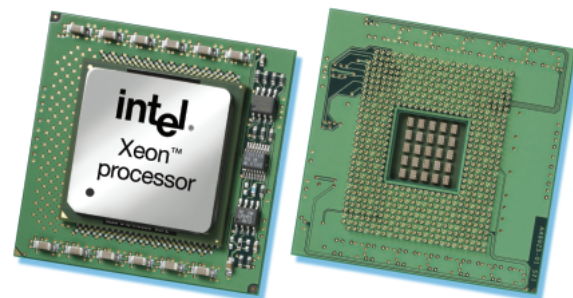


Intel® Xeon™ Processor with 512 KB L2 Cache For Applied Computing

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Product Highlights

- Intel® NetBurst™ Microarchitecture, the foundation to the Intel® Xeon™ processor with 512 KB L2 cache and the Intel® Pentium® 4 processor, delivering new levels of performance
- Hyper-Threading Technology enables a single physical processor to execute two separate code streams (called threads) simultaneously
- Available at 2.0 GHz for applied computing applications
- Validated with the Intel® E7500 chipset
- Both uni-processor and dual-processor capable
- Level 2 Advance Transfer Cache (512 KB) tightly synchronized with the L1 cache and rapid execution engine, improving access times for data
- Level 1 Execution Trace Cache improves throughput and reduces latency
- Rapid Execution Engine provides 2x clock speed for integer computations
- Internet Streaming SIMD Extensions 2 (SSE2) with 144 new instructions
- Embedded life cycle support



Intel® NetBurst™ Microarchitecture and Hyper-Threading Technology

Intel® NetBurst™ Microarchitecture

The foundation for the Intel® Xeon™ processor with 512 KB L2 cache and the Intel® Pentium® 4 processor

The new Intel® NetBurst™ Microarchitecture offers several innovations that allow the Intel® Xeon™ processor along with 512 KB of L2 Advanced Transfer Cache to deliver best-in-class performance in Uni-processor (UP) and Dual-processor (DP) configurations. This microarchitecture features higher clock speeds, a 400 MHz processor side bus, a Rapid Execution Engine, and an Execution Trace Cache. These features are incorporated specifically to increase performance and throughput on your current applications and build headroom for Intel® Xeon™ processor-based platforms to meet current and future performance needs as your business and workloads grow. Specific microarchitectural benefits include:

- Higher clock speeds with future headroom: faster raw execution providing higher transaction rates and faster response times
- Rapid Execution Engine: 2x clock speed for Arithmetic Logic Units (ALU) operations giving increased performance to compute servers
- Execution Trace Cache: Improves performance by removing decoder latency and speeds up instruction throughput

Product Overview

The Intel® Xeon™ processor with 512 KB L2 cache is the solution for applications in the communications market segment that require the highest levels of processing performance; coupled with the Intel® E7500 chipset for high memory bandwidth, high memory capacity, and high I/O bandwidth. A 512 KB L2 Advanced Transfer Cache along with the Intel E7500 chipset create a balanced platform that is ideal for delivering unparalleled price-performance, scalability and flexibility. Intel® Xeon™ processor with 512 KB L2 cache based products demonstrate compelling value in specific applications like web-serving, storage (NAS, SAN), search engines, telecommunications servers, network management, security, voice, and load balancing.



Intel® NetBurst™ Microarchitecture and Hyper-Threading Technology (continued)

Hyper-Threading Technology

Providing Immediate Performance Benefits for Applied Computing Applications

Going beyond GHz (processor core frequency), Intel is changing the landscape of processor design and performance by including simultaneous multi-threading on a processor. Intel's groundbreaking Hyper-Threading

technology, a new on-processor innovation allows multi-processing applications to execute more than one thread per processor, increasing the throughput of applications and enabling processing to scale with requirements to handle future workloads.

Intel® Xeon™ Processor with 512 KB L2 Cache

Product Number	Core Speed (GHz)	External Bus Speed (MHz)	L2 Cache	Thermal Design Power	Voltage
RN80532KC041512	2.0	400 MHz	512K	58.0W	1.5V
Tcase	Package				
70C	603 pin INT3				

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UNITED STATES AND CANADA
Intel Corporation
Robert Noyce Bldg.
2200 Mission College Blvd.
P.O. Box 58119
Santa Clara, CA 95052-8119
USA

EUROPE
Intel Corporation (UK) Ltd.
Pipers Way
Swindon
Wiltshire SN3 1RJ
UK

ASIA-PACIFIC
Intel Semiconductor Ltd.
32/F Two Pacific Place
88 Queensway, Central
Hong Kong, SAR

JAPAN
Intel Kabushiki Kaisha
P.O. Box 115 Tsukuba-gakuen
5-6 Tokodai, Tsukuba-shi
Ibaraki-ken 305
Japan

SOUTH AMERICA
Intel Semicondutores do Brasil
Rue Florida, 1703-2 and CJ22
CEP 04565-001 Sao Paulo-SP
Brazil